NPDES General Permit for New and Existing Sources and New Dischargers in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category for the Western Portion of the Outer Continental Shelf of the Gulf of Mexico (GMG290000)

OOC GMG290000 2017 Permit Renewal – Recommended Changes/Comments List

General Note – all permit text is shown in quotations. All suggested revisions to the proposed permit text are shown in red and ~~strikethroughs~~ within OOC's comments.

Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording/Clarifications/Issue	Rationale
1	DMR	N/A	DMR Instructions	OOC is requesting DMR Instructions reference be added to the permit and Instructions to be posted on Region 6 Oil & Gas online web page as per previous two permit issuances in 2001 and 2007. Detailed instructions would eliminate multiple DMR errors and create more consistency and eliminate some of the (BSEE) inspector's questions during offshore inspections.
			Guidance and clarification of No Data Indicator Codes (NODI) listing and when to use.	Although NODI codes have been used on Region 4 DMRs for some time, not all operators have had experience with NODI codes until NetDMR was instituted. Since the system encompasses many different permit types, not all NODI codes are applicable to Region 6 DMRs. OOC requests guidance on which NODI codes are applicable and in what context they should be used to be added to either the permit or DMR Instructions.
			Correct DMR and NetDMR typos/inconsistencies	OOC is requesting that the DMRs be corrected to reflect the correct permit requirements for each parameter. OOC would like to work with EPA to address all the numerous typos and inconsistencies listed in the attachment below and as Appendix A, as well as others that have not been specifically listed. OOC can provide a more detailed list of these if necessary for clarity. Copy of NeTDMR Corrections.xlsx
		II.D.4	Edit Text accordingly: "DMRs shall be submitted according to the following schedule: a. All DMRs covering the first monitoring period (effective date of the permit to December 31, 2013) shall be submitted by no later than March 31, 2014. b. DMRs for subsequent monitoring periods shall be submitted quarterly no later than sixty ~~thirty~~ (630) days following the end of the quarterly monitoring period. c. If the NetDMR system is unavailable for any reason during the 60-day period when DMRs are due, an extension of 60 days can be granted by the EPA Region 6 Enforcement Branch. This extension can be in the form of an e-mail or letter to the Oil and Gas Industry from Region 6 Enforcement Branch. ~~If for some reason the electronic submittal is not accepted, the permittee would be required to submit paper DMR.~~ The permittee has up to 60 days to submit ~~paper DMRs~~ a one page certified submittal of all outfalls that would have been covered as opposed to a full DMR (hard copy) submittal.	1. The OOC requests that EPA provide a 60 day submittal for Quarterly DMRs. Currently the permit allows for submittal of DMR's 30 days after the Quarter ends. There is a large amount of data that must go through QA/QC before the data can be inputted into NetDMR and once populated the Industry must review for correctness. There are multiple Companies and Consultants that have to submit between 2,500 and 4,000 DMRs a quarter. The extension of 60 days from 30 days will allow the industry to populate NetDMR with quality data. 2. The permit language allows for a 60 day paper DMR submittal if the system is unavailable, but since electronic submissions must be done as soon as the system is available, OOC requests language be added to the permit granting a minimum of a 60-day grace period for submitting electronic DMRs if the NetDMR system is out of service for any reason (e.g. due to maintenance, upgrades, malfunction, etc.). Rather than duplicate work by submitting both paper and electronic DMRs for a Semi-Annual/quarter where the system is unavailable, OOC is requesting that a Certification Letter be acceptable. The letter would contain the permit certification statement and a list of Permitted Feature numbers for which reporting is required for that Semi-annual/quarterly period. The postmark on the letter on or before the DMR due date) would demonstrate timely reporting was attempted while the system is down. The Certification Letter would be less burdensome for both the Oil and Gas Industry and EPA, and would also follow the Paper Reduction Act of 1995. OOC also requests that language be added to the permit addressing a government shutdown where there is the possibly of a longer period of system unavailability (longer than a system refresh or update) and requests a grace period of 60 days from the date the system is back up and functioning. The 60 day extension would begin from the end of the

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				reporting period.
2	Notice of Intent	I.A.2	Edit text as follows: ""Operator" - for the purpose of this permit and only in the context of discharges associated with oil and gas exploration, development, and production activities regulated by this permit, means any party that meets ~~either~~ one of the following three criteria:"	1. The use of "either" implies two qualifying criteria. Three definitions are listed; therefore, in this case, the term "operator" would be applicable should one of the criteria be met. 2. Additionally, OOC is requesting that mandatory limit sets be removed from the eNOI system and permittees be allowed to choose limit sets for the specific discharges that they are responsible for, and to allow for unique situations as well as avoid having to report on unused (but mandatory) limit sets. The eNOI system sets mandatory limit sets (defaults) that may or may not be under the control of the operator or another entity depending on agreements between the parties. Further, mandatory limit sets create a multitude of unnecessary "No Discharge" DMRs creating more work for permittees and filling in the NetDMR system. In some instances, coverage by both parties for the same limit sets may lead to redundant reporting.
3	Drilling Fluids – Prohibitions – Non aqueous Based Drilling Fluids - Exception	I.B.1.a.	Edit Text: "Exception: non aqueous base fluids may be used as a carrier fluid (transporter fluid), lubricity additive or pill in water based drilling fluids and discharged with those drilling fluids provided the discharge continues to meet the no free oil and 96-hour ~~LC50~~ LC_{50} toxicity limits, and a pill is removed prior to discharge".	OOC is requesting this change to provide consistency with other sections of the permit.
4	Drilling Fluids – Limitations	I.B.1.b.	Edit Text: "Toxicity. Discharged drilling fluids shall meet both a daily minimum and a monthly average minimum 96-hour ~~LC50~~ LC_{50} of at least 30,000 ppm..."	OOC is requesting this change to provide consistency with other sections of the permit.
5	Limitations which apply to all drill cuttings –	I.B.2.b.	Edit Text: "Toxicity. Drill cuttings generated using drilling fluids with a daily minimum or a monthly average minimum 96-hour ~~LC50~~ LC_{50} of less than 30,000 ppm..."	OOC is requesting this change to provide consistency with other sections of the permit.
6	Discharge Limitations – Formation Oil	I.B.2.c.2.b	Revise and reword section as follows: "Formation Oil". b) Once per week ~~during drilling~~ when generating and discharging cuttings using the Reverse Phase Extraction test method specified in Part I, Section D.12 of this permit or the gas chromatography/mass spectrometry method specified in Part I, Section D.11 of this permit.	OOC is requesting this change to provide consistency with other sections of the permit.
7	Crude Oil Standard	Appendix C, as referenced by I.D.11	Edit Text: "7.2.1 Crude Oil Reference- NIST ~~1582~~ 2779 Petroleum Crude Oil Standard Reference Material (U.S. Department of Ceommerce ~~N~~national Institute of Standards and Technology, Gaithersburg, MD 20899). This oil will be used in the calibration procedures." Sections 5.2.5.3, 7.2.5.4, and 7.2.5.5 will also need to be adjusted to reflect the appropriate amount of crude equivalent in NAF mud standards.	The National Institute of Standards and Technology has discontinued NIST 1582, the crude oil standard currently referenced in the permit. NIST 2779, Gulf of Mexico Crude Oil Standard is listed as an alternative crude oil standard for use; its target aromatics are similar to those of NIST 1582. Sections 5.2.5.3, 7.2.5.4, and 7.2.5.5 are used to build the calibration curve of the percent contamination of formation oil in NAF mud. The amounts of NIST 2779 crude to add for 0.5%, 1.0%, and 2.0% need to be adjusted to reflect a calibration curve comparable to the curve generated by using the amounts of NIST 1582 currently in the permit.
8	Produced Water	I.B.4.a	Edit Text:	OOC is requesting this change to provide clarity with the permit language and consistency with

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	- Limitations		"…..Critical dilution shall be determined using Table 1 in Appendix D of this permit and is based on the highest estimated monthly average discharge flow rate for the three months prior to the month in which the test sample is collected, discharge pipe diameter, and water depth between the discharge pipe and the bottom….."	language found Part I.B.4.b.3. See also comment No. 9.
9	Produced Water -Monitoring	I.B.4.b.3	Edit text: "….The highest estimated monthly average discharge flow rate recorded during that 12-month period will be the flow baseline for monitoring reduction purpose. During the reduced monitoring period, if the estimated monthly average discharge flow rate increase more than 20% of the flow baseline and there is an increase in the critical dilution most recently tested, an additional test is required for those discharges no later than the following quarter……"	OOC is requesting this change to provide clarity with the permit language and consistency with language found Part I.B.4.a. See also comment No. 8.
10	Miscellaneous Discharges of Seawater and Freshwater which have been chemically treated – Limitations	I.B.11.a	Edit Text: "…..Critical dilution shall be determined using Table 2 in Appendix D of this permit and is based on the highest estimated monthly average discharge flow rate, discharge pipe diameter, and water depth between the discharge pipe and the bottom….."	OOC is requesting this change to provide clarity with the permit language and consistency with language found Part I.B.11.b. See also comment No. 11.
11	Miscellaneous Discharges of Seawater and Freshwater which have been chemically treated – Monitoring Requirements	I.B.11.b	Edit text: "….The highest estimated monthly average discharge flow rate recorded during that 12-month period will be the flow baseline for monitoring reduction purpose. During the reduced monitoring period, if the estimated monthly average discharge flow rate increase more than 20% of the flow baseline and there is an increase in the critical dilution most recently tested, an additional test is required for those discharges no later than the following quarter……"	OOC is requesting this change to provide clarity with the permit language and consistency with language found Part I.B.11.a. See also comment No. 10
12	Miscellaneous Discharges	I.B.10	Add the following: "Mud, Cuttings, and Cement (including tracers) at the seafloor"	Being able to identify top of cement (TOC) behind a wellbore casing can sometimes be challenging given current (acoustic) cement evaluation logging technology. By being able to run tracers detectable by logging tools, the technical limits of acoustic logging tools are bypassed, thus allowing the operator another option that may more clearly identify TOC and ensure the cemented casing meets technical and HSE requirements for the well. The tracer in question would be a very small quantity (~ 1 mCi) of Sc-46 embedded in inert beads suspended in a gel (~1 cup by volume total), placed in the first 50 bbls of cement pumped (and so may extrude to sea floor for top hole casings). Sc-46 decays by beta emission (with detectable gamma), with a half-life of ~84 days (so effectively gone after 5 half-lives or 420 days). The beads will not float or disperse, rather we expect they will be encapsulated into the cement slurry as it solidifies (over 12-24 hours at the sea floor). Sc-46 beta emissions travel distance in water is estimated at 0.11 cm. The tenth thickness in concrete for the gamma emissions is 16 cm. Given these small distances, along with short half-life and cement encapsulation, we would not expect significant ecological risk from this tracer.
13	Excess fluids	I.B.10 & II.G	Edit text: "Excess Cement Slurry ~~[Note: Discharges of cement slurry used for testing cement handling equipment are not authorized.]~~" Add to Miscellaneous Discharge List:	OOC recommends that discharges of cement used for testing and unused cement slurry be authorized by adding a new discharge under Miscellaneous Discharges: "Unused Cement Slurry".

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			"Unused Cement Slurry" Add to the Definitions in Part II.G: ""Unused Cement Slurry" means cement slurry used for testing of equipment or resulting from cement specification changes."	Rationale: Summarizing the details of OOCs submittals to EPA 7/15/11 and 12/15/11 related to this issue a) Equipment testing is critical to proper operation and maintenance of drilling systems. Without adequate testing, well control concerns (among others) can arise. Equipment that is not properly tested has the potential for a catastrophic environmental event. EPA must consider equipment testing/commissioning as "proper operation and maintenance" since if permittees do not test/commission equipment then a permittee cannot truly say that they are complying with this permit requirement. b) The discharge of such fluids would meet all monitoring and limitations of the permit for those fluid types, and since such fluids had not been "used" they would have a lower pollutant potential than the used fluids (which are authorized for discharge). c) Prior EPA determinations have been received which authorized such discharges (and the draft fact sheet does not now provide a substantive justification for now prohibiting such discharges). d) Authorizing discharge will avoid substantive safety risks for managing bulk fluids back to shore including lifting large, heavy containers at sea; transportation risks at sea and on-land and; tank/container cleaning associated with solidified cement (It is difficult to inhibit cement from setting up. Therefore, transport to shore is expected to be solidified blocks in their containers). Safety incidents have occurred during the removal of hardened cement from cutting boxes using jack hammers. One operator had two reported hand/finger injuries occur as a result of disposing the cement test mix from the commissioning of one cement unit on a new build drillship. This also consumes limited onshore disposal facility capacity for essentially benign materials. Finally, the transport of these materials involves environmental consequences including increased air emissions from marine and road transport. OOC presents here additional information on the discharge quantities to support approval of these discharges. The following are typical volumes of cement for the subject issue: 1. New drilling units (MODU or platform rig) commissioning/equipment testing: 100-200 bbls per ship. This is slurry used to test pumping functions and verify flow paths. Assuming 3-7 newly constructed drilling units per year enter the Gulf (1), this is equivalent to 600-1400 bbl/yr of slurry that may be discharged annually. 2. Out of the rigs that come to the GOM, some of those rigs/operators choose to do their commissioning before they enter the GOM and cement slurry from the test mix is not discharged in the GOM. The percentage of rigs that choose to go this route could be as high as 50%. 3. When cement slurry from a test mix cannot be discharged it must be caught in metal containers (i.e. cutting box, etc). The container must be sent in to shore to be disposed of before the cement slurry "sets up" or gets hard. Any time a liquid is transported it creates a greater risk of loss of primary containment. The lifts that must be made to move this container from the rig to a boat and then to the shore also introduce a higher risk for an accident or injury. This in turn puts more personnel in the line of fire and increases exposure rate versus discharging the cement slurry text mix while mixing it on the rig. 4. Other Discharges of Unused Cement Slurry o Repairs: when a cement system malfunctions or equipment must be upgraded or changed out for specific job, the existing cement must be removed, repairs made and testing conducted to ensure proper operation. There are two concerns in this case with a prohibition against the discharge: ▪ If the malfunction occurs during a cementing job, the existing cement must be washed out quickly (before it sets), the repair made, the testing performed and then new cement mixed. Discharge is the most effective means to support rapid repair since typically weight and space constraints

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				prevent holding empty containers offshore for such a contingency. This can involve potential well control issues if the cement system cannot be returned to service quickly. ▪ More generally, even if no cement job is in progress, the testing after repair is critical to assure all systems work as designed and provide cement that can comply with well design requirements. Estimated volumes are 5-100 bbls per event. OOC estimates this occurrence is rare on a per rig basis. Currently there are ~ 99 rigs working in the GOM (2). Assuming one event per year per rig this equates to ~500-10,000 bbls/year of slurry discharged. o Cement not meeting the specifications for a well job: 20-100 bbls. OOC expects this to also be a rare occurrence. Note- if this occurs when a well is in a productive interval, the cement must be washed out of the unit to prevent setting. Then a new batch needs to be quickly mixed to prevent well control issues. Discharge is the most effective means to support rapid response since typically weight and space constraints prevent holding empty containers offshore for such a contingency. This can involve potential well control issues if the cement system cannot be returned to service quickly. A review of BOEM data (3, 4) indicate > 100 wells per year are drilled in the Gulf. Assuming one event per well per year yields 2000-10,000 bbls/yr of slurry discharged. In summary, annual expected discharges of the proposed "Unused Cement Slurry" could be on the order of: Commissioning of new drilling units s= 600-1400 total bbls/year Repairs= 500-10,000 total bbls/year Off spec cement = 1000-10,000 total bbls/year Total= 2100 - 21,400 total bbl/year Compare this to a single well's discharge of authorized Excess Cement Slurry (as authorized and defined in the permit): though highly variable depending on many factors, this is on the order of approximately 100-400 bbls (including pit cleanouts after a job). The majority of this is associated with riserless operations. Assuming 100 wells/year are drilled in the Gulf, this yields approximately 10,000-40,000 bbls of Excess Cement Slurry already authorized by the current permit (and continued for authorization in the proposed permit) for discharge. The volumes shown above for the proposed Unused Cement Slurry are of the same order of magnitude as existing authorized excess cement slurry discharges (and are probably significantly lower). Given this, and typical discharge at or near the surface with immediate dispersion into the water column, the environmental impacts are expected to be insignificant. Note: The values provided in the above are based on worst case scenarios. Numbers to date may be lower based on current MODU activity in the Gulf of Mexico. As an alternative, OOC recommends a joint industry study be performed to assess the overall environmental and safety impacts of this discharge.

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				References 1. Personal communication, Kuehn – Rigzone, 4/23/12. 2. Rigzone- Rig Report: Offshore Rig Fleet by Region http://www.rigzone.com/data/rig_report.asp?rpt=reg 3. http://www.boem.gov/uploadedFiles/BOEM/Newsroom/Offshore_Stats_and_Facts/Gulf_of_Mexico_Region/OCSDrilling.pdf http://www.gomr.boemre.gov/PDFs/2009/2009-016.pdf
14	Miscellaneous Discharges of Seawater and Freshwater which have been chemically treated	I.B.11	Revise and reword section as follows: Excess ~~sea~~water which permits the continuous operation of fire control and utility lift pumps, Excess ~~sea~~water from pressure maintenance and secondary recovery projects, Water released during training of personnel in fire protection, ~~Seaw~~Water used to pressure test piping and pipelines, Ballast water, Once through non-contact cooling water, ~~Seaw~~Water used as piping or equipment preservation fluids, and ~~Seaw~~Water used during Dual Gradient Drilling. Water includes both seawater and freshwater discharges.	OOC requests that a change be made to the Title and list for "Miscellaneous Discharges of Seawater and Freshwater which have been chemically Treated". This will be a word change from "Seawater" and "Freshwater" to "Water". This change will ensure that both "Seawater" and "Freshwater" are included in the chemically treated discharge list.
15	Miscellaneous Discharges of Seawater and Freshwater which have been chemically treated – Limitations	I.B.11.a	Add the following: "[Note: Discharges treated by bromide, chlorine, or hypochlorite or which contain only electrically generated forms of chlorine, hypochlorite, copper ions, iron ions, and aluminium ions are not required for toxicity tests.]"	OOC recommends revising the text to include copper, iron, and aluminium ions to account for the fact that not only is electric current used to generate active Chlorine from seawater, but also there are systems which use sacrificial anodes to generate other anti-biofouling ions (such as, iron, copper and aluminium). Examples of several systems are shown at: http://www.farwestcorrosion.com/fwst/marine/cathelco_anti_fouling_systems_for_lift_pumps.htm and http://www.blumeworldwideservices.com/ . OOC does not expect the discharge will have a toxic impact on the environment as these systems operate in the part per billion concentration range. It is also noted that these systems are in use in the marine industry. • During the 2012 permit renewal, EPA indicated they would reconsider exempting electrically generated ions during the next permit renewal. Comment 21 (c) : (c) OOC requested that the permit language be revised to add ions generated by electric current to the toxicity exclusion list. EPA Response: The OOC did not provide data to support its expectation of no toxic impact for discharges of electrically generated ions such as copper and aluminium. EPA will reconsider the request during the next permit renewal process if OOC provides toxicity test results which can demonstrate no reasonable potential for toxicity in the discharged quantity. Ref: Final permit decision and response to comments received on the draft reissued GMG290000 NPDES permit publicly noticed in the Federal Register on March 7, 2012. Date: September 28, 2012

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				OOC is submitting additional information to support no toxic impact from these systems. Data collected from electric current generated ion treated seawater discharges under current general permits GEG460000 and GMG290000 demonstrate no reasonable potential for toxicity at the critical dilution and should be excluded from the monitoring requirement. These data include electric current generated copper, iron and aluminium ions and are hereby submitted below and as Appendix B.  Ion Toxicity.pdf
16	Miscellaneous Discharges of Seawater and Freshwater which have been chemically treated - Limitations	I.B.11.a	Delete language accordingly: "Treatment Chemicals. The concentration of treatment chemicals in discharged seawater or freshwater shall not exceed the most stringent of the following three constraints: 1) the maximum concentrations and any other conditions specified in the EPA product registration labeling if the chemical is an EPA registered product, or 2) the maximum manufacturer's recommended concentration. ~~3) 500 mg/l~~."	OOC is requesting deletion of the requirement that concentrations of treatment chemicals no exceed 500 mg/L. The 500 mg/L limit was proposed in 1996 as part of a Best Available Technology for control of discharges of seawater or freshwater to which chemicals had been added based on Best Professional Judgement. OOC suggests that the 500 mg/L limit be deleted because the choice of a specific value of 500 mg/L limit is arbitrary, has no scientific basis, and is inconsistent with the approach used to regulate produced water discharges, in which operators have the latitude to select the most effective treatment chemicals provided that toxicity limits are met. We believe that the existing toxicity limit and the requirement that effluent concentrations not exceed manufacturers recommended concentrations effectively achieves the regulatory objective of preventing the discharge of toxic materials in toxic amounts.
17	Cooling Water Intake Structure Requirements – Application Information	I.B.12.a.2.i	Edit text: "As described below, operators of cooling water intake structures subject to Part I.B.~~11~~12may either conduct..."	Improper reference to section, the change corrects the reference.
18	Cooling Water Intake Structure Requirements – Monitoring Requirements	I.B.12.c.2.ii	Delete Section.12.c.2.ii : ~~ii. Entrainment monitoring/sampling. After commencement of operations, the operator must monitor for entrainment. The operator must collect samples to monitor entrainment rates (simple enumeration) for each species over a 24-hour period and no less than biweekly during the primary period of reproduction, larval recruitment, and peak abundance identified during the Source Water Baseline Biological Characterization Study. Representative species may be utilized for this monitoring consistent with their use in the Source Water Baseline Characterization Study. The operator must collect samples only when the cooling water intake structure is in operation. After 24 months of monitoring, the permittee may reduce the monitoring frequency to once per quarter for the remainder of the permit. New facilities may join the currently on-going EPA-approved industry-wide entrainment study.~~	OOC requests the removal of entrainment monitoring/sampling requirement. 40 CFR 125.137 (iv).3 provides the Director the flexibility to reduce the frequency of monitoring following 24 months of bimonthly monitoring provided that "seasonal variations in species and the numbers of individuals that are impinged or entrained " can be detected.. The report on the 24 month industry entrainment study (1) documents that many important Gulf of Mexico species were not detected at all in the regions where new facilities are expected to be installed so that entrainment impacts on these species will be zero; (2) provided documentation on the seasonal dependence of species and number of eggs and larvae available for entrainment, and (3) concludes that anticipated entrainment will have an insignificant impact on fisheries in any season; OOC believes that the intent of 40 CFR 125.137 has effectively been met and that the requirement for ongoing entrainment monitoring can be removed. Our request is based on the results of the results of the recently completed Industry –wide Gulf of Mexico Cooling Water Intake Structure Entrainment Monitoring Study and reinforced by the quarterly entrainment monitoring reports recently submitted by individual operators. Industry believes that these results warrant removal of the entrainment monitoring/sampling because (a) the study showed that no meaningful impacts from entrainment are expected. (b) since no meaningful impact was found the seasonality of the impact is a moot point, (c) the SEAMAP database provides a continually-updated source of information that is functionally equivalent to permit-required monitoring for the purpose of estimating entrainment impacts. The final study reports are

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				attached below and as Appendix C. The following is a brief summary of key findings of the industry entrainment monitoring study: 1. Study results provide data for enumeration of entrainment losses by species and for total egg and larval losses as required by the Permit. 2. Estimated entrainment impacts on ichthyoplankton are insignificant. A. Entrainment monitoring/sampling is required during the primary period of reproduction, larval recruitment, and peak abundance for each species, specifically, identified as part of the Source Water Biological Baseline Characterization Study (SWBBCS); however, the SWBBCS found no evidence to suggest CWIS would impact selected species of socioeconomic and ecological importance. B. In this study, catches of SWBBCS selected species were too low to statistically model (all exhibited >90% zeroes across tows; some 100% zeroes). C. Thus, no meaningful impacts from entrainment on these species are expected to occur. D. Daily entrainment was extremely small compared to the corresponding daily reference abundances drifting past each facility; thus, no meaningful impacts are expected for any species. 3. Temporal and environmental influences on ichthyoplankton densities. A. While no impacts are expected to occur at any intake depth, the most prevalent influence was sampling depth, whereby densities declined exponentially with increasing depth. B. In general, the lowest densities occurred during the fall and greatest densities during the spring. 4. Using SEAMAP data to estimate entrainment loss. A. Ichthyoplankton densities also declined exponentially with total water column depth; all study sites were deeper than the shallower depths (about ≤ 200 m) where sharp increases in densities began in the shoreward direction. B. For each of the study sites and across months, forecasted densities based on SEAMAP data were consistently 1½ to 2 times greater than those observed during this study. C. No impacts are expected based on densities estimated from either dataset. D. Thus, SEAMAP data appear adequate for future estimates of impacts on the ichthyoplankton community. The results of recent quarterly on-platform entrainment monitoring studies conducted by two operators (attached below and as Appendix C) are fully consistent with the results of the Entrainment Monitoring Study. The concentrations of larvae of key socioeconomic and ecological important species were typically zero in these measurements. This is consistent with industry's views that (1) cooling water intake structures on offshore facilities present an insignificant risk to fisheries, (2) the quarterly monitoring requirement is providing no new useful information and (3) the requirement should be dropped entirely.

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				2014 - Entrainment_Monitori JSM Entrainment 3Q2015_Final.pdf JSM Entrainment Rpt 2Q14.pdf JSM Entrainment Rpt 3Q14.pdf JSM Entrainment Rpt 4Q14.pdf Revised JSM Entrainment Rpt 1Q15 Revised JSM Entrainment Rpt 2Q15 Luclus Q1 Sampling Results.pdf Luclus Q2 Sampling Results.pdf
19	Cooling Water Intake Structure Requirements – Monitoring Requirements	I.B.12.c.1.i and I.B.12.c.2.i and I.B.C.3.ii	Edit each section accordingly: Section.12.c.1.i New non-Fixed Facilities i. Visual or remote inspections. Beginning the coverage of this permit, the operator must conduct either visual inspections or use remote monitoring devices (e.g., remotely operated vehicles (ROV), subsea cameras, or other monitoring device) during the period the cooling water intake structure is in operation. The operator must conduct visual or remote inspections at least ~~monthly~~ quarterly to ensure that the required design and construction technologies are maintained and operated so they continue to function as designed. Visual or remote monitoring is not required when conditions such as storms, high seas, evacuation, or other factors make it unduly hazardous to personnel, the facility, or the equipment utilized. The operator must provide an explanation for any such failure to visually or remotely monitor with the subsequent DMR submittal. Section.12.c.2.i New Fixed Facilities that do not employ sea chests as intake structures i.Visual or remote inspections. Beginning the coverage of this permit, the operator must conduct either visual inspections or use remote monitoring devices (e.g., remotely operated vehicles (ROV), subsea cameras, or other monitoring device) during the period the cooling water intake structure is in operation. The operator must conduct visual or remote inspections at least ~~monthly~~ quarterly to ensure that the required design and construction technologies are maintained and operated so they continue to function as designed. Visual or remote monitoring is not required when conditions such as storms, high seas, evacuation, or other factors make it unduly hazardous to personnel, the facility, or the equipment utilized. The operator must provide an explanation for any such failure to visually or remotely monitor with the subsequent DMR submittal. Section.12.c.3.i New Fixed Facilities that employ sea chests as intake structures i.Visual or remote inspections. Beginning the coverage of this permit, the operator must conduct either visual inspections or use remote monitoring devices (e.g., remotely operated vehicles (ROV), subsea cameras, or other monitoring device) during the period the cooling water intake structure is in operation. The operator must conduct visual or remote inspections at least	OOC is requesting visual or remote inspections be reduced to quarterly. A set of photos (attached below and as Appendix D) of intakes taken at a 6 month interval shows only limited blockage (i.e. minor growth) of intake screens, suggesting that a quarterly visual monitoring requirement would suffice to ensure intakes are not obscured by marine growth and that the required design and construction technologies are maintained and operated so that they continue function as designed. Based on information contained in the Interim Guidance For Performance-Based Reduction of NPDES Permit Monitoring Frequencies issued by EPA in April 1996, monitoring reductions based on facility performance should be considered during permit reissuance. Under this guidance, facilities can demonstrate this historical performance through both compliance and enforcement history and a demonstrated ability to consistently reduce pollutants in their discharge below the levels necessary to meet existing permit requirements. Despite the special focus of Section 316(b) on impacts of intake water, not discharges of effluent into water, the requirements are linked to the core elements of the NPDES permit program; therefore, the OOC believes the approach for determining degree of burden reduction available to facilities in this manner is sound and will not reduce the ability of EPA to determine non-compliance with permit requirements. Monitoring requirements are not considered effluent limitations under section 402(o) of the Clean Water Act, and therefore anti-backsliding prohibitions would not be triggered by reductions in monitoring frequencies. According to this guidance, the permitting authority may modify the permit solely to reduce monitoring requirements if sufficient resources are available. To determine eligibility for reductions, the permitting authority would calculate the 24-month composite average for each eligible parameter, in this case visual monitoring of marine growth (i.e., obscurity or blockage). The composite average is compared with the permit limit, and the information in Table 1 of the guidance document, which is based on the existing monitoring frequency, to determine the potential monitoring frequency reduction. As shown in the example photos provided, the 6-month growth rate demonstrates negligible variation (20% or less) in observable growth, satisfying the criteria for a reduction in baseline monitoring of once per month to not more than once per quarter. CWIS Images-1.pdf

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<tr><th>Comment No.</th><th>Type/Category</th><th>Permit Section Ref.</th><th>Revised Permit Wording/Clarifications/Issue</th><th>Rationale</th></tr>
<tr><td></td><td></td><td></td><td>~~monthly~~ quarterly to ensure that the required design and construction technologies are maintained and operated so they continue to function as designed. Visual or remote monitoring is not required when conditions such as storms, high seas, evacuation, or other factors make it unduly hazardous to personnel, the facility, or the equipment utilized. The operator must provide an explanation for any such failure to visually or remotely monitor with the subsequent DMR submittal.</td><td></td></tr>
<tr><td>20</td><td>Cooling Water Intake Structure Requirements – Monitoring Requirements</td><td>I.B.12.c.1.ii and I.B.12.c.2.iii and I.B.c.3.ii</td><td>Edit each section accordingly:

Section.12.c.1.ii
New non-Fixed Facilities

ii. Velocity monitoring. The operator must monitor intake flow velocity across the intake screens to ensure the maximum intake flow velocity does not exceed 0.5 ft/s. The intake flow velocity shall be monitored ~~daily~~ quarterly if the most recently reported intake flow velocity is less than 0.30 ft/s; monthly if the most recently reported intake flow velocity is 0.30 to 0.38 ft/s; and daily if the most recently reported intake flow velocity exceeded 0.38 ft/s. If the permitee is monitoring daily, a downtime, up to two weeks, for periodic maintenance or repair is allowed and must be reported in the DMRs.

Section.12.c.2.iii
New Fixed Facilities that do not employ sea chests as intake structures

iii. Velocity monitoring. The operator must monitor intake flow velocity across the intake screens to ensure the maximum intake flow velocity does not exceed 0.5 ft/s. The intake flow velocity shall be monitored ~~daily~~ quarterly if the most recently reported intake flow velocity is less than 0.30 ft/s; monthly if the most recently reported intake flow velocity is 0.30 to 0.38 ft/s; and daily if the most recently reported intake flow velocity exceeded 0.38 ft/s. If the permitee is monitoring daily, a downtime, up to two weeks, for periodic maintenance or repair is allowed and must be reported in the DMRs.

Section.12.c.3.ii
New Fixed Facilities that employ sea chests as intake structures

ii. Velocity monitoring. The operator must monitor intake flow velocity across the intake screens to ensure the maximum intake flow velocity does not exceed 0.5 ft/s. The intake flow velocity shall be monitored ~~daily~~ quarterly if the most recently reported intake flow velocity is less than 0.30 ft/s; monthly if the most recently reported intake flow velocity is 0.30 to 0.38 ft/s; and daily if the most recently reported intake flow velocity exceeded 0.38 ft/s. If the permitee is monitoring daily, a downtime, up to two weeks, for periodic maintenance or repair is allowed and must be reported in the DMRs.</td><td>OOC is proposing a tiered approach to velocity monitoring versus the current daily monitoring requirement. Namely,

<table><tr><th>If the Most recent intake flow velocity</th><th>Then Monitoring Frequency Should be</th></tr><tr><td><0.300</td><td>Quarterly</td></tr><tr><td>0.300 – 0.38</td><td>Monthly</td></tr><tr><td>>0.384</td><td>Daily</td></tr></table>
Velocity monitoring consists of a demonstration requirement based on the facilities' proposed design and a compliance monitoring requirement that verifies the velocity limitation is being met. There is agreement with the purpose of inspection, but not the frequency.

The tiered velocity monitoring approach is based upon a statistical analysis of six separate CWIS operated in the GOM during 2015. The analysis is based on the rate-of-change in daily velocity monitoring data (attached below and as Appendix E). An ANOVA indicates no statistical difference in the rate of change in intake velocity among the five intakes ($P < 0.05$). The data are approximately normally distributed with a mean change in velocity equal to 0.0001 (ft/s)/day and a standard deviation equal to 0.0106 (ft/s)/day. Based on these data, there is a 95% probability that the mean velocity increase over any 30-day period will be less than 0.11 (ft/s)/day; and a 95% probability that the mean velocity increase over any 90-day period will be less than 0.20 (ft/s)/day. Therefore, 95% of all monthly intake velocity measurements will be less than 0.5 ft/s provided that the previous month's velocity measurement was less than 0.39 ft/s. Similarly, 95% of all quarterly velocity measurements will be less than 0.5 ft/s provided that the previous quarter's measurement was less than 0.30 ft/s.

We note this data makes sense relative to visual inspection information presented elsewhere- the rate of biogrowth on intakes is quite low and so the rate of change of intake velocity would also be expected to be quite low, hence allowing for reduced monitoring frequencies (using a tiered approach to ensure compliance with the 0.5 fps standard for any CWIS design).

 
Tiered Intake Velocity Monitoring Methodolo</td></tr>
<tr><td>21</td><td>Dispersants, Surfactants, and Detergents</td><td>I.C.3</td><td>Add paragraph space :

"…The restriction is imposed because detergents disperse and emulsify oil, thereby increasing toxicity and making the detection of a discharge of oil more difficult."
Insert new paragraph space</td><td>OOC believes these should be broken into two separate paragraphs.</td></tr>
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			"Waste water associated with tank and pit cleaning operations..."	
22	Reporting Requirements	II.D.7.b(3)	Edit text: "Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part ~~II~~ I of the permit to be reported within 24 hours."	To correct the typo, there are no maximum daily discharge limits for any pollutants listed in Part II of the permit.
23	Definitions	II.G.57	Edit text: "No Activity Zones" means those areas identified by the ~~Minerals Management Service (MMS)~~ Bureau of Ocean Energy Management (BOEM) where no structures..."	Effective October 1, 2011, the United States Department of Interior replaced its Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), formerly the Minerals Management Service (MMS), with two new bureaus -- the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM). No Activity Zones are now designated by BOEM.
24	Effluent Limitations, Prohibitions and Monitoring Requirements – Hydrate Control Fluids	Appendix F – Footnote 33	Edit text: Footnote 33: " *33 Toxicity test is waived if the discharge of ~~methonal~~ methanol is less than 20 bbl ~~per event~~ within a 7-day period or the discharge of ~~ethalene~~ ethylene glycol is less than 200 bbl ~~per event~~ within a 7-day period. "	OOC is requesting the changes to provide consistency between language at Part I.B.10.a and Appendix F Footnote #33regarding waiver of toxicity test and to correct spelling errors.
25	Miscellaneous Discharges	I.B.10 and I.B.10.a	Add "brine and water based mud discharge at the seafloor for temporary well abandonment" to the list of Miscellaneous Discharges. Revised text under I.B.10.a : [Exceptions] Uncontaminated seawater, uncontaminated freshwater, source water and source sand, uncontaminated bilge water and uncontaminated ballast water may be discharged from platforms that are on automatic purge systems without monitoring for free oil when the facilities are not manned. Additionally, discharges at the sea floor of: uncontaminated seawater, muds and cuttings prior to installation of the marine riser, cement, blowout preventer fluid, subsea wellhead preservation fluids, subsea production control fluid, umbilical steel tube storage fluid, leak tracer fluid, and riser tensioner fluids may be discharged without monitoring with the static sheen test when conditions make observation of a visual sheen on the surface of the receiving water impossible. Discharges of muds, cuttings, and cement at the seafloor before installation of the marine riser, and brine and water based mud discharge at the seafloor for temporary well abandonment are exempted from the free oil limitation.	OOC is requesting the addition of brine and/or water based mud discharge at the seafloor to the list of Miscellaneous Discharges. The final phases of many temporary well abandonments (a prelude to permanent abandonment) could involve the discharge of clean brine or water-based mud from the upper most portion of the well at the seafloor. This would occur because a riser is not present (or has been disconnected from the abandoned well). The producing reservoir has been isolated in earlier stages of the abandonment with cement and plugs, and the tubing/annulus/casing has been scoured by prior well fluid circulations. Further, static sheen, oil and grease and priority pollutant limitations would have been already met on prior discharges of the brine (in earlier stages of the abandonment). Any water-based mud usage would have also been shown compliant by earlier drilling fluid monitoring. Finally, the brine and muds are engineered fluids, meeting detailed specifications; one of which is no hydrocarbon content is allowed (for safety and performance reasons).

APPENDICES

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E